Measure title: **Access for mobility impaired people in Burgos**

City: **Burgos** *Project:* **Caravel** *Measure number:* **11.11**

A Introduction

A1 Objectives

The measure outlines a transitional strategy to improve and implement better modes of transport for impaired people users though the adapt information to user and accessibility.

- **Objective 1 :** To improve access for individuals with limited mobility.

A2 Description

The measure entailed improvements in mobility for people with limited mobility following a series of measures that were implemented or launched, as improvement the accessibility on buses and on the sidewalks, so that the transport information for all impaired people. Through the collaboration with existing associations representing different mobility impairments within the new Accessibility Office aimed to ensure accessibility in Burgos for all of its citizens.

B Measure implementation

B1 Innovative aspects

The innovative aspect of the measure was to improve access to transport for impaired people and to facilitate their mobility around the streets, thereby ensuring on-foot access for all individuals travelling around the city, regardless of their physical condition. This important criterion was new for public transport in Burgos. The new Pact for Mobility in the city guarantees that all citizens will be able to move around freely in all public places using all appropriate modes of transport.

This includes the following innovative aspects of the measure are:

- **Use of new technology/ITS:** Introduction of new panels into public buses to favour the visual and oral information of the impaired citizens.

Image 1: Oral and visual system to inform the location of bus shelters

- **New physical infrastructure solutions:** Improved the local mobility in the streets and in the bus-stops.

Image 2: Elements to improve the accessibility in the public buses

B2 Situation before CIVITAS

Burgos has been working to guarantee access for people with limited mobility for some years. Several actions have been undertaken for this purpose such as modifying sections of the pavement along the main streets, ensuring that there are no obstacles to mobility in businesses and housing and providing preferential parking facilities and buses that are adapted to the needs of this particular group.

Nevertheless, much remains to be done in this area to improve the quality of life for people with reduced mobility; for example, 16% of crosswalks were not sloped, access was unsatisfactory in 15% of public buildings, 75% of buses did not provide satisfactory access for people with limited mobility.

B3 Actual implementation of the measure

The measure was implemented in the following stages:

Stage 1: Identification of uneasy access *(from February 1st, 2005 – to December 18th, 2007)* – The stage included the identification of streets, buildings, buildings that do not provide easy access. The catalogue or map will be one tool to be developed in the demonstration activities. Unhindered access to the streets and improving the adequate access on the transport urban. planning to improve the access and information for impaired people.

Image 3: Elements to improve the accessibility in the sidewalks **Image 4:** View of the Accessibility plan of the city

Stage 2: Adapt the buses and bus-stops *(from April 1st, 2005 – to December 30th, 2007)* – The stage included the adaptation of buses and bus-stops with adequate access and information for impaired people

Stage 3: Promotion *(from April 15th, 2006 – to November 30th, 2007)* – Educational campaigns and marketing to promote the use of the transport by the impaired people

Image 5: Promotion campaign examples for reduced mobility people

Stage 4: Evaluation of the activities *(from February 1st, 2005 – to December 31st, 2008)* – All the evaluation activities were performed according to the evaluation plan.

B4 Deviations from the original plan

No problems have arisen during the implementation. All foreseen activities took place as planned.

B5 Inter-relationships with other measures

The measure is related to other measures as follows:

- **Measure 6.2.- Integrated access restriction strategy in Burgos –** Important actions have been developed every year to adapt the streets correctly for pedestrians and to facilitate the access for impaired people
- **Measure 8.2.** – **Clean high mobility services in Burgos –** Incorporation of new public buses with new mechanical and comfort elements to improve the accessibility of impaired people. Burgos has obtained that all fleet of public buses was adapted to the impaired people.
- **Measure 12.2 – Info-mobility tools in Burgos** – New panels and systems have been incorporated in the buses to improve the information for people with problems of communication.

C Evaluation – methodology and results

C1 Measurement methodology

C1.1 Impacts and Indicators

The evaluation of this measure consists in the monitoring, all over the duration of the project, of the development of the level of the service and of its use. Many quantitative and qualitative parameters (derived from direct market analysis, customer satisfaction reports and surveys) have been used to give an exhaustive view of the success of the actions
The evaluation has been taken place with a strong interrelation with similar activities under development at a national and international level by ITCL.

11.11. ACCESS FOR MOBILITY IMPAIRED PEOPLE IN BURGOS						
Evaluation Category	**N°**	**Indicator**	**Units**	**Source of data**	**Methodology for indicator construction (survey, modeling, etc)**	**Baseline date**
Society	14	Acceptance level	%	Questionnaires	Measured/ Calculated	Julio 2007
Society	15	Perception or PT accessibility	5 point scale	Questionnaires	Measured/ Calculated	Julio 2007
Transport	19	Quality of PT service	5 point scale	Questionnaires	Measured/ Calculated	Julio 2007

Detailed description of the indicator methodologies:

Indicator	**Methodology for indicator construction**	
	Definition	**Methods of Measurement**
14. Acceptance level	Acceptance level is defined as the percentage of the population who favourably receives or approve of the measure. Unit: %	Method: User acceptance can be assessed through surveys (e.g. questionnaires by mail or by face-to-face interviews). Frequency: Measurements should be made twice during the project Target group: general public (including residents and visitors), operators, PT, customers…
15. Perception of service accessibility	Perception of service accessibility is defined as the user's perception of the physical accessibility of the service. This concerns, for instance, the distance to the nearest PT stop and the convenience of getting there. Unit: index of "accessibility perception" on a 5-point scale.	Method: Data can be collected by means of surveys (e.g. Questionnaires by mail or by face-to face interviews Frequency: Measurements should be made twice during the project Target group: Service users
19. Quality of service	Quality of service is defined as the user's perception of the overall quality of the service provided. Unit: index of the "perception" of service quality	Method: The perception of service quality should be measures on a five-point scale. Frequency: Measurements should be made twice during the project Target group: PT or other service users.

C1.2 Establishing a baseline

Various tools were used to evaluate the 3 performance indicators for this measure. Further information was gathered from data sources of the TP Services, principally data of impaired people Association. The frequency of measurement and the exact source data are defined in the section C1.1. and C2. of this document.

Additional survey work took place on July of 2007 to establish the first data which included the awareness, acceptance and accessibility of impaired people to the initiative and the Public Transport Service.

C1.3 Building the business-as-usual scenario

Under the parameters of the public transport, if the implementation wasn't performed more than 1,000 trips realized by the disables never been done as the buses were equipped with low ramps. It is difficult to measure the number of people helped by the oral and visual advices, but the comments received affirmed that many blind people decide to use the PT as far as now some tool give the correct situation (50 comments received from 50 people).

The respect of not to park in front of the bus stops has increased and the data from the police department as well as from the perception of the bus drivers has increased and now there are few vehicles parked disturbing the bus when it stops.

In term of the pavement, thanks to an agreement Blind Association-Council it is possible to say that 95% of the pavement is in level zero in main crosses and zebra crosses, so the mobility is now easier, and many people (more than 100 comments) agreed that now it is easier even if people they only go with a trolley or a baby trolley.

If the project never been realized the disable parking plan never allowed to park in special places already reserve for then, and more than 500 disable people use that special parking.

Finally, it the project never wasn't performed the City would never received the qualification concerning Public Transport of "very good" by the Blind and Disable National Association.

C2 Measure results

The results are presented under sub headings corresponding to the areas used for indicators – economy, energy, environment, society and transport.

C2.1 Economy

N/A

C2.2 Energy

N/A

C2.3 Environment

N/A

C2.4 Transport

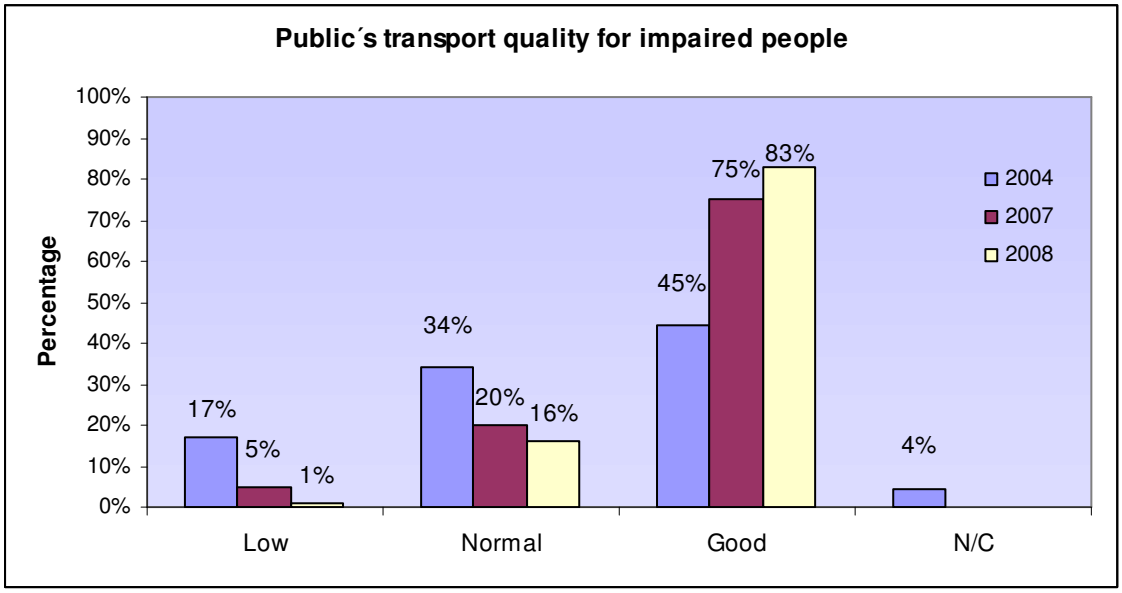
Indicator - Quality of PT services

Table 1: Results of transport indicators				
Indicator	**Relevant Question**	**Data Result 2004**	**Data Result 2007**	**Data Result 2008**
(19) **Quality of PT service**	How do you rank the quality of PT?	Good: 44,6% Normal:34,2% Low: 16,9% N/C: 4,4%	Good: 75% Normal: 20% Low: 5 %	Good: 83% Normal: 16% Low: 1 %

2007 Data results: 250 impaired people completed and returned the survey with the aim to the rate of awareness regarding the quality of PT.30,0% of the respondents were male and 70,0% female. The age ranges of the respondents were distributed as 0,0% (<20), 10,0% (20-30), 30,0% (31-40), 45,0% (41-65) and 15,0% (>65).

The respondents were asked about the quality of PT, 75% stated that it was good, 20% stated that it was normal, but 5% stated that the quality of PT was low.

2008 Data results: In the same way, 250 impaired people completed and returned the survey. In this case, 43,8% of the respondents were male and 56,3% female. The age ranges of the respondents were distributed as 0,0% (<20), 15,6% (20-30), 25,0% (31-40), 34,4,3% (41-65) and 25,0% (>65). 83% stated that it was good, 16% stated that it was normal, but 1% stated that the quality of PT was low.



Graphic 1: Comparative of Public Transport Quality in 2004 and 2007. Survey realized to impaired people

The opinion of the disable is clearly supporting the actions. From the poor results of 2004 (only good in a 45%) we can see now that they give a qualification of “good” the 83% of the people interviewed. The installation in the 100% of the buses of low ramps, as well as the special training done with the drivers in order they listen to the requirements of the disables and they give all kind of facilities to them is clearly given good results. Only a 1% (it means two people in a survey of 250) considered the service now has got poor quality and it isn’t accessible.

C2.5 Society

For the society indicators, the same methodology was used in 2007 and 2008, according to the rules defining in the C1 section.

Survey work took place in July of 2007 to establish the Baseline Scenario which included the **acceptance and perception of service accessibility** of impaired people to initiative and the evaluation of accessibility strategy.

The survey for **acceptance and perception of service accessibility** to establish the data results of **impaired people** to initiative and the evaluation of accessibility strategy took place between June/July of 2008. In these surveys, same questionnaires of 2007 surveys were presented to the **impaired people** in different areas of the city. The principal aim understood if the accessibility work had any influence in the mobility issues of the impaired people.

Table 2: Details of the relevant society surveys

Name of target group	Date of survey	Sample size	Purpose	Relevant question to assess
Impaired people	July 2007	150	acceptance and perception of service accessibility of specific measure	Acceptance level - How often do you use the TP? – Perception of service accessibility - What do you think about the accessibility in PT?
Impaired people	June/July 2008	150		

2007 Data results: 150 impaired people completed and returned the survey with the aim to the rate of awareness regarding the acceptance and use of PT Services. 30,0% of the respondents were male and 70,0% female. The age ranges of the respondents were distributed as 0,0% (<20), 10,0% (20-30), 30,0% (31-40), 45,0% (41-65) and 15,0% (>65).

2008 Data results: In the same way, 150 impaired people completed and returned the survey. In this case, 43,8% of the respondents were male and 56,3% female. The age ranges of the respondents were distributed as 0,0% (<20), 15,6% (20-30), 25,0% (31-40), 34,4,3% (41-65) and 25,0% (>65).

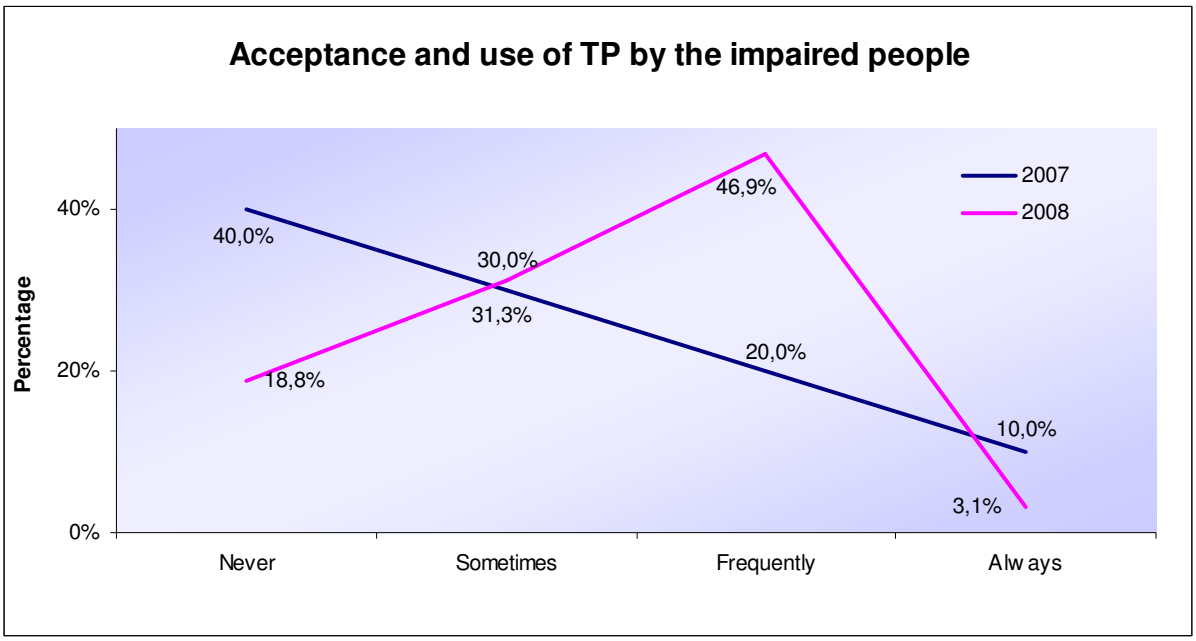
Indicator - Acceptance level

Table 3: Results of society indicators (I)

Indicator	Relevant Question	Data Result 2007	Data Result 2008
(14) **Acceptance level**	How often do you use the TP?	Always: 10% Frequently: 20% Sometimes: 30% Never. 40%	Always: 3% Frequently: 47% Sometimes: 31% Never. 19%

In 2007, the respondents were asked about the acceptance and use of PT Services, 10% stated that they always used the PT services, 20% frequently, 30% sometimes and 40% never.

In 2008, 3% stated that they always used the PT services, 47% frequently, 31% sometimes and 19% never.



Graphic 2: Acceptance and use of Public Transport Services by the impaired people.

The acceptance level of the impaired people regarding to the use of PT showed that the users modified their habits of use of PT. The data were so variable respect to one year to other. In this sense, the results of 2007 had been improved in 2008 in the answers never (21,2%), sometimes (1%) and frequently (26,9%). However, the users that habitually used the PT decreased 7%. Then, the impaired people improved the acceptance level of PT thank to the use of PT is used frequently or always by this users.

These results are due to use frequently the PT for the most important movements of the impaired people. The high number of user that used it frequently in 2008 and the reduction of the trips “never” indicate that this collective is changed this habits of mobility and consider the PT as important medium to travel in the city. It is due to the best conditions to introduce in the PT to improve the quality of the service for these collectives (i.e. ramps in the buses, places to the wheelchairs and informative panels in the bus, …) which has favoured that the impaired people used more the PT.

The reduction of impaired people that always used the PT to movement was due to the facilities given to this collective to obtain his own adapted private car, which was subsidised at the beginning of 2006 through some programmes performed by the Blind and Disables Association in order to give them more independence and many impaired people bought it and reduced the use of PT..

It was saw in the survey anyway that disable people can take the bus without any problem, and the use has increased. The explanations about the people never taking the bus was give

to the people in charge of asking in order to not to manipulate the data. The explanation was that they don't take PT not because they don't like it; the reason is that they prefer to use their own car to have more independence

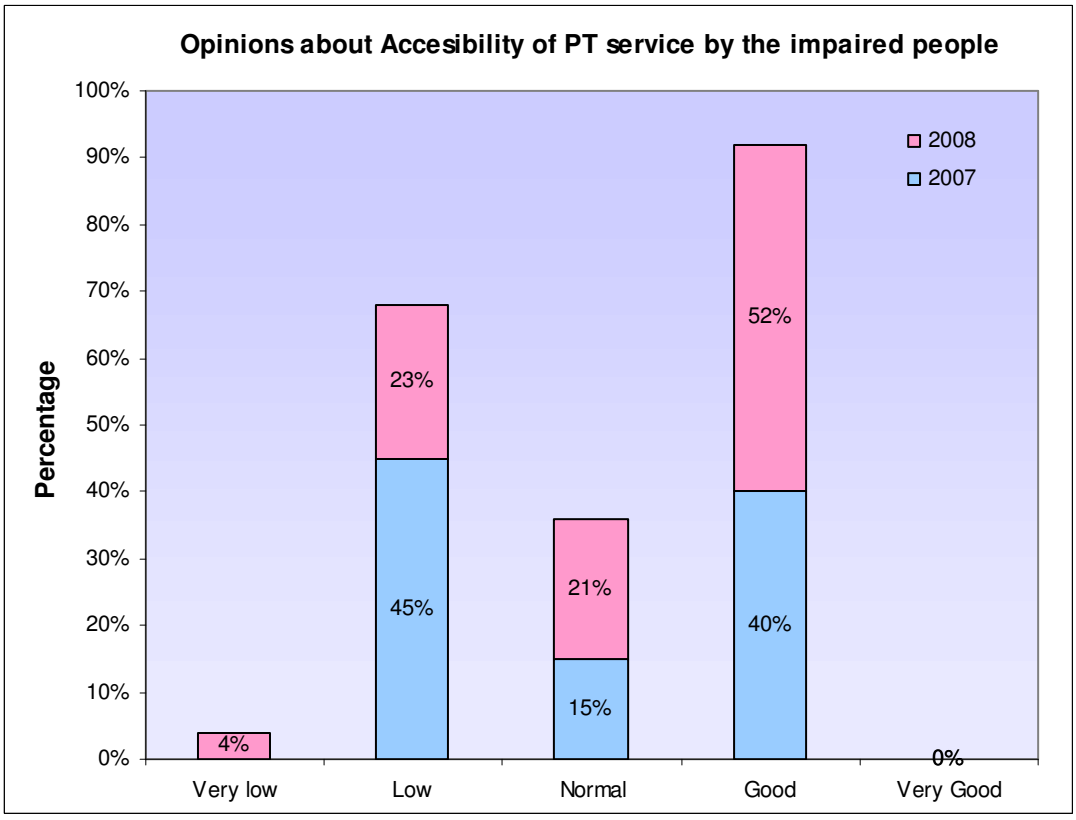
Indicator - Perception of service accessibility

Table 4: Results of society indicators (I)

Indicator	Relevant Question	Data Result 2005	Data Result 2007	Data Result 2008
(15) **Perception of service accessibility**	What do you think about the accessibility in PT?	Very Good: 17,1% Good: 21,7% Normal: 32,8% Low: 14,2% Very Low: 7,7%	Very Good: 0% Good: 40% Normal: 15% Low: 45% Very Low: 0%	Very Good: 0% Good: 52% Normal: 23% Low: 21% Very Low: 4%

In 2007, the respondents were asked about the perception of accessibility of PT services, 40% stated that it was good, 15% stated that it was normal, but 45% stated that the accessibility of PT was low.

In 2008, 52% stated that it was good, 21% stated that it was normal, but 23% stated that the accessibility of PT was low and 4% stated it was very low.



Graphic 3: Perception of Accessibility of Public Transport Services by the impaired people.

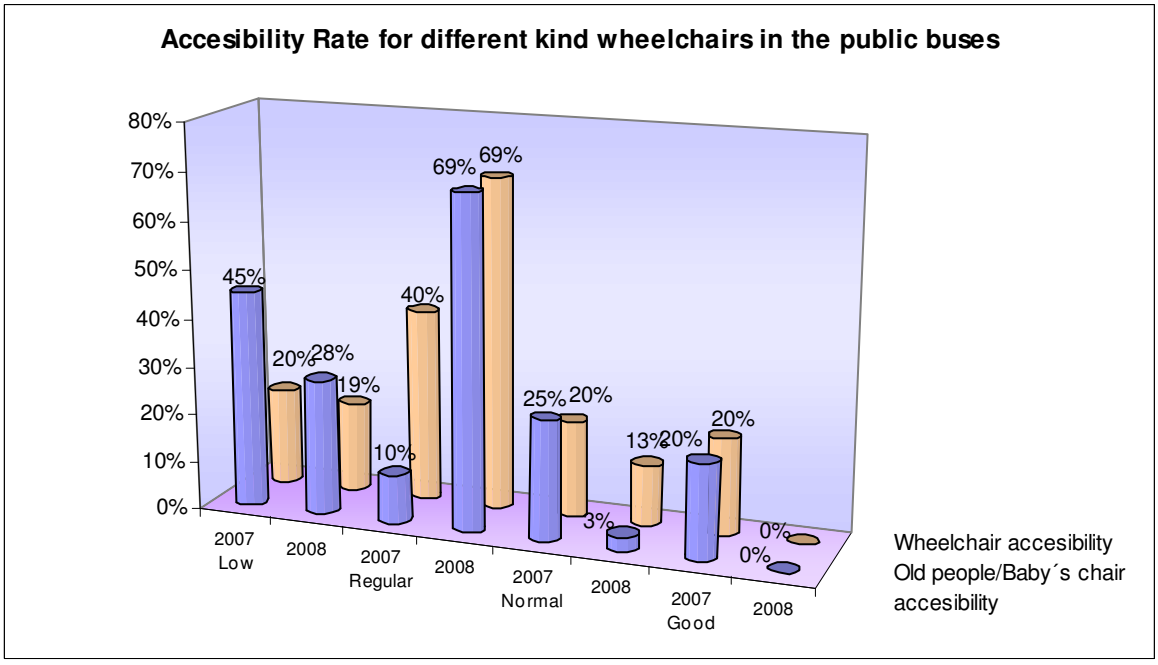
The results showed as the perception of accessibility was increased in the 12% in good stated respect to 2007 and 6% respect to normal perception. Moreover, the cases of low perception were reduced 22% in 2008.

It allows ensuring that the impaired people have better conditions to travel in PT thanks to new equipment on buses which has certified the increased the rate of the accessibility for impaired people of the city. They want even more accessibility facilities and despite the answer is good, there is work to do in the future hearing the necessities of that 25% of the people still don't convince, despite the comments are favourable to follow to work in the same line.

Additionally, other questions were launched to the impaired people to assess the perception of accessibility referring to:

- Wheelchair accessibility: It was consider in 2008 as regular by the 69% of the respondents and normal by 13% and only 19% low. The figures for the 2007 were worse by the regular stage and better for good and normal stage.

- Old people/baby´s chair accessibility: It was followed the same tendency that the previous question. The impaired people opined that regular situation were the most perception of the accessibility (69%) in 2008. The situation was better than 2007 in the stages of low and worse in normal and good situations.



Graphic 4: Perception of Accessibility of Public Transport Services by the impaired people. Comparatives about accessibility rate.

The facilities in the buses were exactly the same (or worst in some cases due to the finalization of the bus stops project) but it is clear that they prefer to give a qualification as "regular" because they have included the idea of the accessibility in their minds and they forget the past situation (much worst than in the years 2007 and 2008).

Concerning the old people or baby's chair it can be explained as perhaps the drivers don't give all the facilities and they try to save time asking the parents to go up with the trolley without any special attention from them, and the same for old people. To install the low ramp in the bus stops takes some time and the drivers preferred to save that time asking them to do an effort. Those comments are never said to a disable. On that way, the perception is not as good as other points in the use of a baby trolley.

C3 Achievement of quantifiable targets

No.	Target	Rating
1	To improve access for individuals with limited mobility	**
NA = Not Assessed	* = Not achieved	**= Achieved in full	***= Exceeded

C4 Up-scaling of results

The idea of the Council once this action is finished is to follow the actions. First, with the Accessibility Office, installed in a permanent way in the Council, Second, with the Disable associations and thirdly, through other projects as Niches +, which Burgos is taking part.

The idea is also to include other actions concerning mobility as inclusion of Braille in bus stops and the bus station, with oral advises in all bus shelters, include the accessibility in all the public buildings and if it is possible in private buildings and provide tools to improve the accessibility in case of emergency in public buildings too.

The promotion of the respect and the training to the stakeholders will be actions to be performed as well as the improving of the facilities for trolleys or elderly people. Some other actions to perform with children and with citizens in general to aware of the situation can be done too.

The total accessibility implementation in the bus stops will increase within the next years in all the bus shelters in the city, new shelter or the ones which have been improved, giving more facilities in a mid term horizon.

C5 Appraisal of evaluation approach

N/A

C6 Summary of evaluation results

The key results are as follows:

- **Success of the access for impaired people** – The activities launched to improve the success of impaired people have allowed obtained good results in the perception that this collective has in the accessibility.
- **Use the PT by parents with children –** Thanks to accessibility of buses, many parents with baby chairs have began to use the PT to move in the city. The PT service has favoured that this collective use the bus with some benefits to enter in the bus and reservation space for the chairs.

D Lessons learned

D1 Barriers and drivers

D1.1 Barriers

- **Barrier 1** – Conflicting responsibilities between different local council departments to develop measures that might delay demonstration activities. In such an eventuality, the CIVITAS local committee would decide which department should bear responsibility for the tasks and for coordination with other departments.
- **Barrier 2** – Dependency of different implementation steps within the measure that could lead to delays in the implementation timetable. A plan defining the different steps and their interrelations could be established to prevent dependence between consecutive steps
- **Barrier 3** – Urban structures that might physically hinder the measures (i.e. infrastructures, operational area) which could cause delays to the information service. A plan defining the different steps and their interrelations could be established to prevent dependence between consecutive steps

D1.2 Drivers

- **Driver 1** – The strong political commitment to improve the quality of live of the impaired people and to develop adaptations in the buses, stop-buses and sidewalks.

D2 Participation of stakeholders

- **Stakeholder 1 -** Public transport users: People that use the buses everyday as transport**.** They value the rate of satisfaction, comfort, information and equipment installed and demand better quality on transport.
- **Stakeholder 2** – Local/regional administration
- **Stakeholder 3 -** Potential public transport users: People that normally not use the public transport due to kind of service offer by the Transport Department, but if the conditions change they could use the public buses.
- **Stakeholder 4 -** Disabled/elderly people: People with important problems to move in the city due to the un-accessible elements included in the transport modes. They claim to improve their quality of life and easy mobility by the city. The project has helped to reduce the rate of in satisfaction and to introduce equipment which had been demanded during along time.
- **Stakeholder 5 -** Disabled people association: Several associations have worked jointly in the project to introduce the demands of their disabled associates. Moreover, they are integrated in the Mobility Office to realize proposals which were integrated in the objectives of Civitas/Caravel project.

D3 Recommendations

- **Suggestions to improve the accessibility in PT by the impaired people collective-** These people use the PT frequently and they know as accessibility could be improvement. To know his opinion should be priority if the PT service wants to resolve the problems of accessibility.

D4 Future activities relating to the measure

The accessibility is an important tool that the city has included in this mobility program for the future. In the new regulation of mobility in the city, the accessibility for parents with trolleys has been included. New parking for this collective will be defined close to administrative buildings to favour his mobility.

New European project will be launched proximately with the aim to follow to work in the accessibility issues that need to improve yet. It is expect to work in the information of PT by blind people, information of accessibility to impaired tourist people and data base for the state of accessibility in the principal buildings of the city and moreover, to improve the conditions for elderly people.